REMARKS

Request for Continued Examination

Applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

Claims 21-28, 30-38 and 40 are rejected under 35 USC 103a as being unpatentable over Lee (US 2003/0234795) in view of Champion et al (6,774,953)

Applicant has cancelled claims 21-40.

New Claims

Applicant has added new claims 41-63. No new matter is added. Comments regarding the general differences between the present invention with respect to the cited references and comments regarding patentability of specific claims with respect to the cited references are provided below.

In the previous office action (see OA mailed 02/10/2006), the Examiner indicated that Fig.3 of the cited reference of Lee disclosed the look up table and the adder circuit of the present invention. Additionally, referring to the second cited reference of Champion et al., the Examiner believed that Fig.3 by Champion et al. disclosed the look up table, adder circuit, and that Fig.2 disclosed the gamma correction circuit.

Applicant firstly points out that the present invention is utilized to achieve RGB to RGB conversion while the cited reference of Lee is utilized to provide YUV to RGB conversion. Applicant notes that such functionality is not equivalent. Secondly, the calculation method and structure of the present invention RGB to RGB circuit and that of the cited reference of Champion et al. are not equivalent. The Examiner stated

that "it would have been obvious to a person of ordinary skill in the art at the time of the invention to use the RGB format conversion apparatus with the LUTs and the adder circuit of Fig.3 of Champion, into the color conversion apparatus of Lee to provide a color conversion apparatus using the look-up-tables (LUTs) to significantly reduce the computation and memory requirements in the color transformation process, as suggested by Champion et al. (Column 2, lines 58-61)". However, applicant asserts that it is in fact not clear how one could utilize the LUTs and adder circuit of Fig.3 of Champion within the circuit structure of Lee because the two designs have different and incompatible circuit structures. For example, see the different structures by comparing Fig.3 between each of the two references. Additionally, applicant notes that the teachings of Lee and Champion et al. are directed at different goals. That is, there is a lack of motivation to combine the teachings of Lee directed at "converting of pixels from YUV format to RGB format using color look-up tables" with the teachings of Champion et al. directed at "color warping". (See titles of respective references.) Therefore, in addition to the specific reasons explained below, applicant asserts that newly added claims 41-60 should not be found unpatentable over Lee in view of Champion et al. for at least the reasons that 1) neither Champion et al. nor Lee teach all the limitations of the present invention, 2) it is not obvious how one would combine the teachings of Champion et al. with those of Lee to result in the present invention as claimed, and 3) there is a lack of motivation to combine the teachings of Champion et al. with that of Lee as each of said cited references is directed at a different objective.

Concerning newly added independent claim 41, claim 41 is an apparatus claim directed at a first embodiment of the present invention shown in Fig.4. **The input and output color elements of the first look up table and the second look up table of the present invention belong to the same color. However, the input and output color elements of the look up table of Lee belong to different colors.** Furthermore, Lee does not teach utilizing a gamma correction technique. **The adder of the present invention is coupled to the first look up table, the second lookup table, and the gamma correction circuit. The adder then sums three color elements respectively outputted by first look up table, second look up table, and gamma correction**

circuit to thereby generate its output. This feature is not disclosed by Lee and Champion et al. Applicant asserts that claim 41 should not be found unpatentable in view of the cited references for at least the reason that there are claimed elements (i.e., the adder) not taught by either of the cited references. As claims 42-48 are dependent on claim 41, if claim 41 is found allowable so too the dependent claims 42-48. Consideration of new claims 41-48 is respectively requested.

Concerning newly added independent claim 49, claim 49 is an apparatus claim directed at a second embodiment of the present invention shown in Fig.5. Similar to the comments for claim 41 described above, the limitations of the look up table claimed by the present invention in claim 49 and those taught by Lee are different. **Additionally, it is the adder that sums the three color elements belonging to different colors.** This is in contrast to the two cited references of Lee and Champion et al. where it is the adder that sums the color elements having the same color components. For at least these reasons, applicant asserts that claim 49 should not be found unpatentable in view of the cited references. As claims 50-55 are dependent on claim 49, if claim 49 is found allowable so too the dependent claims 50-55. Consideration of new claims 49-55 is respectively requested.

Concerning new independent claim 56, claim 56 is a method claim according to a method embodiment of the present invention as described in the specification for Fig.4 and Fig.5 of the present invention. Similar to the comments for claims 41 and 49 described above, the limitations of the look up table claimed by the present invention and those taught by Lee are different. Additionally, in the present invention one of the color elements of output color and three different color components (R,G,B) have a relationship **wherein two color elements (first and second converted color elements) are passed via a look up table and one is passed via the gamma correction circuit, those converted color elements outputted by the look up table and gamma correction circuit belong to different color components which respectively corresponding to red, green blue color components.** For at least these reasons, applicant asserts that claim 56 should not be found unpatentable in view of the cited references. As claims 57-63 are dependent on claim 56, if claim 56 is found

allowable so too the dependent claims 57-63. Consideration of new claims 56-63 is respectively requested.

Additionally, concerning dependent claims 46, 52, and 60, applicant points out that Champion et al. teach in Fig.3 and state in col 6, lines 2-6 that "The least significant bits 310 of the input color are used in a correction calculator 312 to calculate corrections 314. The corrections 314 are added to the approximations 308 at adders 316 to produce the transformed color signals R'_L, G'_L and B'_L, 318." Applicant notes that this is in contrast to the present invention as claimed in claims 46, 53, and 62 and shown in Fig.3 of the present invention, "wherein remaining least significant bits of the first and second color elements are not utilized in generating the first and second converted color elements." In addition to Fig.3, support for new claims 46, 52, and 60 is located in paragraph [0034] of the present invention stating, "By not using the least significant bits of the first green value G, the G-values are effectively grouped into groups of eight as in Fig.2" and in paragraph [0032] stating, "Although mathematically incorrect, this approximation is justified due to the insignificant difference between the different members of each group and the small overall effect of the first green value G on the second red value R'." Applicant asserts claims 46, 52, and 60 should not be found unpatentable in view of the teachings of Lee and Champion et al. for at least the reason that neither Lee nor Champion teach not utilizing remaining least significant bits of the color elements when generating the converted color elements. In fact, Champion et al. specifically teach the opposite. Consideration of dependent claims 46, 52, and 60 is respectfully requested.

Sincerely yours,

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